



NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

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Security Classification of Items in the Bumed News Letter: Attention is called to a change in policy of the Bumed News Letter effective with this issue. Although the News Letter continues as a "restricted" Letter, many items contained in it are of an open or unclassified nature. Henceforth such articles will be labeled "Not Restricted". Articles not so designated are "restricted" and are to be handled in accordance with Navy regulations. It is permissible

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Radioactive Phosphorus: There are striking advantages in the use of radioactive phosphorus as a means of internal therapeutic radiation. Its half life is long enough to permit the necessary chemical manipulations to prepare it for administration without undue loss of activity; it is short enough that there are no long-range harmful effects on the body. The beta rays given off have relatively low penetrating power (2 to 4 mm. of tissue). Certain cells, among them leukemic cells, preferentially absorb the material. The final degradation product of the reaction, sulfur, is not radioactive and is harmless.

Eighty-one cases including leukemia, myeloma, Hodgkin's disease and polycythemia vera have been treated with radioactive phosphorus. Most of the cases had failed to respond to Roentgen therapy or were known to be refractory to it or were far advanced. About one-third of the cases treated showed temporary improvement. Because of the nature of cases selected for therapy, the results in this series appear discouraging in the aggregate. The treatment is palliative rather than curative. It may be temporarily effective in some cases that no longer respond to Roentgen therapy. It is useless when but little normal hematopoietic tissue remains.

On the basis of the foregoing cases two facts become apparent. First, no harm was done by the administration of radioactive phosphorus in the doses used. Second, some cases have done better than could be expected with the ordinary means of therapy. The result depends, in large measure, on the extent of involvement of the bone marrow by the leukemic process when therapy is undertaken. If there is extensive leukemic infiltration of the marrow and very little normal hematopoiesis, nothing is to be gained by treatment aimed at wiping out the leukemic cells. In effect, one will be simply changing a case of leukemia into one of aplastic anemia. Hence a sternal bone marrow aspiration or biopsy is desirable in assessing a case being considered for this form of therapy.

That therapeutic doses of radioactive phosphorus do not appreciably damage normal red blood cell formation is shown by several of the cases which had rapid and well defined increases in red blood cell counts at a time when the white blood cell count was decreasing following administration of the material. Of interest in this connection is the fact that a similar or smaller dose used in the therapy of polycythemia vera may induce a marked and rapid drop in red cell count.

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Apparently if some normal marrow remains, even heavy dosages of radioactive phosphorus will do no permanent harm. Thus in one case of this series, very heavy dosage was used in a desperate attempt to ameliorate the patient's condition. The total white blood cell count was dropped to a level of 350, but there was a prompt improvement from this low level, and the patient had a remission of some months' duration following this course of therapy. Such drastic therapy is not to be recommended, however, and this case is cited simply to show that even heavy dosage will not produce complete destruction of all granulopoietic tissue.

Interestingly enough, the megakaryocytes are apparently relatively unharmed by the dosage used, and frequently an increase in platelet count follows therapy with radioactive phosphorus. In another case, the increasing platelet count was a guide to the beginning of the remission and a falling platelet count antedated the clinical and hematologic recrudescence of the leukemic process.

The basal metabolic rate is one of the useful guides to progress of the disease. It reflects to an appreciable degree the activity of the leukemic process and may be an even better index at times during the period of therapy than is the peripheral white blood cell count, which may remain low while the leukemic process is active in the tissues. In several of the cases in the present series, the failure of appearance of a significant decrease in the basal metabolic rate was indicative of the later unfavorable course.

Radiation sickness was encountered only in one case even though many of the cases treated had previously been made severely ill by roentgen radiation. This patient complained of nausea following treatment and refused further therapy.

Studies of distribution of radioactive phosphorus in the tissues of these leukemic patients and of its partition in the blood in general confirm the results reported by Erf and others. Owing to the ready diffusibility of the phosphate ion, radioactive phosphorus permeates all the body tissues and fluids but varies strikingly in its concentration. Leukemic tissue acquires a considerably higher concentration of it than does normal tissue.

During the first few hours after the administration of radioactive phosphorus, it remains in fair concentration in the blood plasma, but is readily taken up by the blood cells and the tissues. After some hours much of it present in the blood stream is in the leukocytes with very little in the plasma and a fair amount in the red cells.

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At the end of three days, about 75 per cent of the intravenously administered dose is retained in the body, and 50 per cent remains at the end of a week. The proportion retained is fairly constant.

While the degree of leukemic infiltration of a given tissue largely influences the amount of radioactive phosphorus absorbed, certain tissues tend to concentrate the material. The liver, kidneys, spleen and bone marrow show proportionately large amounts, while cartilage, fat and brain show little. After some days, the concentration in bone itself increases relatively.

Soon after the administration of radioactive phosphorus, the saliva contains an amount nearly comparable to that in the blood. This concentration gradually disappears. The normal spinal fluid does not attain a concentration approaching that of the blood until a number of days have passed, when the amount in the blood is low. Bile, particularly several days after injection, may contain larger amounts than does the blood owing to the selective deposition in the liver.

Practically all radioactive phosphorus administered intravenously is excreted by the kidneys. If administered orally, up to 25 per cent may be recovered from the feces, but this is chiefly material which has been precipitated as insoluble phosphates and was never absorbed. The presence of appreciable amounts in the feces, when the material has been administered intravenously, indicates either hemorrhage into the intestinal tract or fairly extensive leukemic infiltration of the mucosa. (Am. J. M. Sc., June '45 - Warren)

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Radioactive Phosphorus in Treatment of Polycythemia Vera: The effectiveness of radioactive phosphorus as a therapeutic agent in polycythemia vera is well established. This type of treatment is in no way curative, but the disease can be more readily controlled by internal radiation than by any other therapeutic procedure now available. Hall et al observed remissions lasting from 9 to 26 months in one series. The results obtained, the ease of administration, the absence of radiation sickness and toxic effects on the bone marrow, together with the fact that radioactivity disappears gradually and dosage can be adequately controlled, indicate that this method of treatment is superior to other methods employed in the past. However, leukopenia, thrombocytopenia and anemia may be produced, and adequate observation is essential to prevent irreversible damage to the bone marrow.

Although it has been demonstrated that intravenous administration of the material is preferable for various reasons, the desirability of oral administration from a practical standpoint is such that this method of administration should be carefully evaluated. (Am. J. M. Sc., June '45)

Penicillin in Cerebrospinal Fluid in the Presence of Meningeal Irritation:

Following administration of penicillin intravenously to normal monkeys, no penicillin was detected in the cisternal cerebrospinal fluid. However, following artificially-induced meningeal irritation, penicillin appeared in the spinal fluid as early as 15 minutes after systemic administration. Irritation was induced by a blow on the head sufficient to produce mild cerebral concussion, by pneumoencephalography, by injection of heparinized blood into the spinal fluid, or by intrathecal injection of a culture of Staph. aureus to produce meningitis. In some cases, the concentration of penicillin in spinal fluid was as high as 50 per cent of the concentration in the blood, and it remained in the spinal fluid for approximately 3 hours. These findings have been confirmed in three clinical cases - one of meningitis and two of meningeal irritation following pneumoencephalography.

Since the concentration of penicillin in the cerebrospinal fluid reaches levels of 10 units per c.c. for from 2 to 3 hours after systemic administration if meningeal irritation is present, it does not appear that intrathecal injection should be necessary for the treatment of most inflammatory diseases of the central nervous system. (OEMcmr-501, Johnson, Univ. of Chicago, CMR Bulletin #44)

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Penetration of Streptomycin into the Eye: A single intravenous or intramuscular injection of 10,000 units of streptomycin per kg. of body weight produced detectable concentrations of streptomycin in the conjunctiva, sclera, extraocular muscles, and aqueous humor of the normal rabbit eye. The concentrations in these tissues were increased by raising the systemic dose to 100,000 units per kg. of body weight. With the larger systemic dose, streptomycin also appeared in the cornea, vitreous, chorioretinal tissue, and optic nerve of the normal rabbit eye. Locally administered, streptomycin in solutions (5,000 or 50,000 units per c.c. of physiologic saline) or in an ointment (5,000 units per Gm.) failed to penetrate readily into the aqueous humor of the rabbit eye with normal cornea. However, both the solution and the ointment forms penetrated readily into the aqueous humor when the cornea was partially abraded. High concentrations of streptomycin were obtained in the aqueous humor of normal rabbit eyes following administration by iontophoresis of streptomycin solution containing 5,000 units per c.c. of physiological saline. (OEMcmr-56, Leopold and Nichols, Univ. of Pa., Ms. for publication, CMR Bulletin #52)

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Treatment of Filariasis with Neostibosan: Thirty patients with filariasis due to Wuchereria bancrofti have been kept under observation following treatment

with from 4.6 Gm. to 10.5 Gm. of neostibosan over periods of from 33 to 54 days. One year after the end of treatment, 13 of these patients were free of circulating microfilariae, and 5 others showed reductions in the number of embryos in the blood of from 87 to 99 per cent. The 12 remaining patients showed little change in the number of circulating microfilariae.

Fifteen untreated patients, used as controls, were still infected after 14 months, 12 presenting more, and 3 presenting fewer circulating microfilariae than when first observed.

None of the treated patients, some of whom had been free of microfilariae for 12 months, showed untoward symptoms referable to treatment. (OEMcmr-490, Culbertson et al, Columbia Univ., Ms. for publication, CMR Bulletin #52)

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Dislocations of the Shoulder: Acute or initial dislocations of the shoulder are common and require not only early, non-traumatic reduction but also adequate post-reduction therapy to prevent a chronically dislocating joint. When a shoulder is dislocated, there is not only a laceration of the joint capsule, but also a stretching or sprain of the biceps tendon and its surrounding tendon sheath.

Roentgenographic examination of the shoulder joint in all cases of acute dislocations is necessary to rule out an accompanying fracture. Morphine may be given by the subcutaneous or intravenous route or a general anesthesia may be employed for reduction. Trauma is minimized by the following manner of reduction. With the patient lying supine, an assistant applies firm traction on the opposite arm, or the same force may be obtained by placing a sheet around the thorax for traction. Gentle, constant and increasing traction is applied to the involved arm, with the patient's elbow flexed at a right angle, the forearm being held in a vertical position. The patient is reassured, if not under general anesthesia, and asked to breathe deeply and to relax the shoulder muscles. While constant traction is maintained, the flexed arm is gently rotated toward the head. The head of the humerus then slides into the joint. This method has been successful in anterior, posterior and inferior or subglenoid dislocations and is not as traumatizing as some of the methods which have been advocated. Following reduction of the joint, a body bandage and supporting sling should be used for three weeks before motion is started. After this period of immobilization, graduated exercises are employed until normal activity is attained in from six to eight weeks. (Am. J. Surg., March '45 - L. F. Bush)

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The Antithrombotic Action of Gelatin: It has been observed that gelatin, when administered intravenously, produces an increased bleeding and clotting time in experimental animals in deep shock. The possible application of this property in the prophylaxis or therapy of deep venous thrombosis is being investigated by Haimovici and Fine. These investigators have studied the effect of intravenously administered gelatin upon venous thrombosis produced in dogs by injecting a solution of quinine-urethane. Following the gelatin infusion, there was prolongation of the bleeding time and of the clotting time. The prothrombin time of whole plasma remained normal, but that of diluted plasma was prolonged.

Eight of twelve samples of gelatin exhibited a definite antithrombotic action when given prophylactically in a single injection. No beneficial effect was obtained when the gelatin was given after injury to the veins.

These data are of a purely experimental nature and should not form a basis for clinical application until more information has been obtained. (New England J. Med., July 5, '45)

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Proteinuria Following the Use of Various Blood Substitutes: In the preparation of proteins for use as blood substitutes it may happen that some of the molecules are split into halves or quarters. If the size of such molecular fragments is less than that of serum albumin they may readily pass through the glomerular filter, and if the amount given is sufficiently large, they may appear in the urine. As a biological test for the presence of such fragments, various proposed blood substitutes have been injected in increasing quantities intraperitoneally into rats until proteinuria was induced. The amount of protein excreted was high when egg white, Bence-Jones protein, or human globin was used. Next in order were bovine albumin, human serum albumin, and human gamma globulin. Accompanying the proteinuria was an increase in kidney weight thought to be due to re-absorption of protein from the glomerular filtrate by the cells of the kidney tubules. (OEMcmr-338, Addis, Stanford Univ., CMR Bulletin #49)

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Nitrogen Metabolism in Injury and Disease: After severe injuries and operations, and in acute infectious disease, large amounts of nitrogen are excreted in the urine. The degree and duration of these losses are related to the severity of the injury. They cannot be reduced or eliminated by the administration of practicable quantities of protein and calories. This phenomenon of "toxic destruction of protein" is observed only in previously well nourished, healthy individuals. It also appears to be self-limited. In chronic diseases,

or after an individual has wasted a certain amount of tissue as the result of an acute injury or disease, positive nitrogen balance can be established provided that the patient can be made to take adequate quantities of protein and sufficient calories. "Toxic destruction of protein" is not related to fever nor to increased caloric expenditure.

The excessive urinary nitrogen is composed of urea and ammonia. There is no detectable increase in the less completely oxidized nitrogenous products. "Toxic destruction of protein" is not regularly associated with creatinuria.

Serum albumin is usually found to be low shortly after injury or early in the course of disease. Instead of continuing to fall during the period of "toxic destruction", it may rise slightly, but not to a normal concentration. Something other than protein wastage must be responsible for the initial fall. Plasma a-amino acid nitrogen is also low shortly after injury and early in infections and remains low until recovery is far advanced, even when nitrogen catabolism is greatly increased by administration of high protein diets.

During the 24 hours immediately following operation, total nitrogen catabolism and creatinine formation are quite low, even if nothing but small amounts of glucose are given. Plasma a-amino acid nitrogen falls sharply at the same time. The extent of the drop is directly proportional to the severity of the operative procedure and roughly is inversely proportional to the initial amino acid concentration. The latter reflects the preoperative condition of the patient. If this is normal, the plasma amino acid nitrogen is greater than 4 mg. per cent. If the patient is seriously ill before operation, the amino acid nitrogen is less than 4 mg. per cent. If it is greatly reduced, it may fall no further as a result of the operation.

At the very onset of a physical insult there is, therefore, a striking change in the nitrogen metabolism, marked usually by a drop in serum albumin, certainly by a reduction of a-amino acid nitrogen. There is no detectable, associated increase of creatine, creatinine, or other partially oxidized nitrogenous products. Certain of the observed facts suggest that nitrogen metabolism is, as it were, short-circuited, so that all protein administered is diverted immediately to the production of urea and ammonia. (OEMcmr-420, Peters, Yale Univ., CMR Bulletin #54)

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Neurogenic Ossifying Fibromyopathies: In a roentgenographic survey of the pelvis and lower extremities of 62 patients with paraplegia due to injury or disease of the spinal cord or cauda equina, deposits of osseous material were noted in the soft tissue in 23 cases. The deposits consisted of masses and

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sheets of trabeculated bone which were most abundant about the hip and knee joints where they were apparently laid down within muscle or fascial planes. No significant abnormalities were noted in the bones or joints themselves. The ossifications were recognized as early as forty days following cord injury. While 27 of the 62 patients showed evidence of clinical improvement of motor and sensory disturbances, only 3 of these improved patients showed osseous deposits. Of the 35 unimproved patients, however, 20 showed ossifications. Dermatome levels in the patients with ossifications varied from C-7 to and including the cauda equina.

In comparing the patients having ossifications with the unaffected group, there appeared to be no significant differences with regard to the site or severity of the injury, time of operative treatment, presence or absence of decubitus ulcers, urinary tract infection or associated injuries or infections, age, or blood levels of calcium and total protein.

In the group with ossifications, there was a slightly higher incidence of renal calculi, and blood levels of phosphorus and phosphatase were slightly elevated. Several of these patients had sustained additional trauma to the lower extremities; while ossifications were present in the regions of the hips or knees, no osseous deposits of consequence were noted about the traumatized areas and several fractures showed evidence of normal healing.

The three major types of lesions which have been observed in the affected extremities following disease or injury of the spinal cord, cauda equina, dorsal nerve roots, or peripheral nerves are: (1) osseous and muscular atrophy following loss of motor innervation; (2) osteoarthropathies of the Charcot type following disease or injury of the afferent pathways; (3) ossifying fibromyopathies following trauma or disease of the cord, cauda equina, or peripheral nerves with consequent paraplegia. (Bull. U.S. Army Med. Dept., Aug. '45 - Soule)

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The Effects of Diathermy on Tissues Contiguous to Implanted Surgical Metals: The potential danger of short-wave diathermy in patients with metals embedded in body tissues has been a subject of much discussion among physiotherapists. The danger allegedly arises from the possibility that the radiation, even in therapeutic dosage, might heat the metal to temperatures sufficiently high to injure contiguous tissues. The importance of this problem has increased considerably since the onset of the war. In addition to the enormous number of patients with retained shrapnel and other missile fragments, many patients are being treated by permanent or temporary

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implantation of metals. Undoubtedly the most serious consequence of diathermy would be the destruction of important peripheral nerves which would be rendered particularly vulnerable because of being wrapped in tantalum foil or by contiguity to bone plates and screws. Destruction of skin, bone and muscle is similarly possible. Although it is unlikely that diathermy would be purposely administered to the brain, the use of such therapy in the treatment of sinus infections and cerebral vascular disorders might expose metal skull plates to the short-wave field.

A preliminary report of experiments designed to determine whether or not diathermic injury takes place owing to implanted metals appeared in the Bumed News Letter of July 7, 1944. These experiments have been extended, and it will be noted that the conclusions of the preliminary report and of the present one differ somewhat. This is explained by the sparsity of the experimental work concerned in the first report and by the far greater success in the present investigations in simulating the therapeutic dosage used in patients and in avoiding overdosage.

Short-wave diathermy, i.e., short-wave radio-frequency, was applied to the tissues of experimental animals in which tantalum and silver plates, foil and wire, and stainless steel plates were embedded. The metals were wrapped around the sciatic nerves, or inserted into intramuscular or subcutaneous pouches, or fitted into skull defects over the intact dura.

There was no significant difference between the temperatures of the tissues on the side containing the metal and of those on the control side irrespective of the type of diathermy machine employed, the method of application of the short-wave energy or the nature of the metal used. There were several additional observations of interest in the studies of tissue temperatures. It was noted that whereas the subcutaneous temperatures were lower than the intramuscular temperatures before the application of short-wave diathermy, the reverse was true at the end of the trial. This subcutaneous hyperthermia subsided more quickly than the intramuscular temperature so that within from 5 to 10 minutes it fell below the latter. In a few of the experiments the intramuscular temperature exceeded the subcutaneous temperature throughout the passage of the current. The tissue temperatures remained elevated for periods of time up to three hours after the passage of diathermy. The body temperature was invariably elevated, the rise being directly proportional to the degree of hyperthermia in the hind limbs.

Histological examination of tissues contiguous to the metal disclosed no significant destructive effects from diathermy attributable to the presence of the metal. When destructive changes occurred, they were equally extensive on the control side and were due to burning by excess heating. A striking

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finding when the diathermy had caused a third degree burn of the overlying skin was the lack of significant change in sciatic nerves wrapped in tantalum foil.

In all the animals in this series, the major blood supply was anatomically intact. It is conceivable that when the circulation is impaired either by trauma or by peripheral vascular disease, tissue damage by the use of diathermy might result. It is standard practice in physiotherapy to be extremely cautious in the use of diathermy in such patients. (Nav. Med. Res. Inst., Res. Proj. X-133 - Pudenz et al)

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Relation of Light and Riboflavin to Corneal Vascularization: In experiments using rats, brilliant, continuous illumination with incandescent lamps did not augment the changes in the cornea and conjunctiva resulting from riboflavin deficiency. After injuries to the cornea by ultraviolet light, healing was handicapped by such illumination and by protracted riboflavin deficiency. The failure to observe any effect of either visible or ultraviolet light on the riboflavin content of the cornea indicates that this change is not the result of local destruction of riboflavin by light. The healing of an injury involving primarily the epithelium was affected neither by light nor by riboflavin deficiency alone under the conditions of these experiments. However, a combination of these two factors did lead to definite changes. High riboflavin intake failed to prevent the occurrence of spontaneous corneal vascularity.

The variety of agents and deficiencies which will induce corneal vascularization indicates the need for caution in interpretation of corneal vascularization in humans. (OEMcmr-248, Lowry and Bessey, Pub. Health Res. Inst., New York, CMR Bulletin #44)

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Large-Scale Production of Isoagglutinin Reagents: Blood from group A donors is used for the preparation of anti-B isoagglutinin, and blood from group O plus group B donors is used for the preparation of anti-A isoagglutinin. Blood for the production of anti-Rh reagents must, of course, be collected from donors who, as a result either of transfusion or, more commonly, of pregnancy, have developed the antibodies. By applying the fractionation procedure to plasma from random donors of the proper groups, it is possible to prepare effective anti-A and anti-B reagents. By applying these procedures to plasma containing low titers of the anti-Rh isoagglutinin, it is possible to use the blood of from 5 to 8 times as many donors as could be used effectively if unconcentrated serum were being used.

The chemical methods employed in the fractionation and concentration of the isoagglutinins make possible the use of many of the other protein components of the plasma, thus allowing a more effective utilization of the human proteins, and minimizing the cost of production of these reagents. The methods provide a fraction containing isoagglutinins concentrated at least eightfold over plasma, thus assuring the effectiveness of the blood grouping material. (OEMcmr-139 and 384, Oncley et al, Harvard Univ., Ms. for publication, CMR Bulletin #50)

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The Use of Alginate Solution in Denture Work: The use of alginate solution in denture work was mentioned in the News Letter of May 25, 1945. The method of applying this solution is hereinafter given.

In applying the alginate and cellophane, the usual procedure of test packing is followed until just before final closure of the case. At this time, the cast is completely moistened with a heavy coat of alginate solution; a fresh layer of cellophane moistened with water is laid over the cast. The case is then closed. An excess of alginate solution should flow freely from all sides of the flask.

If the above technic of application is adhered to, it may be anticipated that a saving of from 15 to 30 minutes will result from elimination of the need for foiling the cast. From 30 to 60 minutes are also saved by eliminating the difficulty of removing foil from the denture surface. There will be no need to re-finish or polish the peripheries on the denture as accuracy in these areas has been obtained. (Dentistry Div., BuMed - A. G. Lyle)

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Demobilization of Medical Corps, United States Navy: In the discharge of its obligation to the public, the Navy Department desires to accomplish as rapidly as possible the release of physicians, dentists, nurses and other officers and enlisted personnel of the Naval Reserve, trained in medical fields. It is obvious that during the next few months these specialists will be needed at almost full strength for the care, evacuation and disposition of the wounded and sick still coming from overseas, and also in connection with general demobilization.

Transportation of the wounded requires full staffing at the point of departure, on transports enroute to the medical centers in the United States, and within the naval hospitals and dispensaries of the continental United States. It should be remembered that the peak hospital census in military establishments in this country following V-E Day was not reached until July 1, 1945.

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The medical corps will perform a vital function over the next year or eighteen months in the separation process promised for over two and a half million men. Every man and woman returned to civilian life must be given a physical examination to include a chest X-ray, blood tests, and any other test individually indicated.

The necessary lag in medical demobilization behind general demobilization will be kept at an absolute minimum and every effort will be made to respond at the earliest moment to the special needs of medical schools, teaching hospitals, and individual and community hardship cases.

Effective 15 September 1945, therefore, the higher critical score for medical corps release is necessary, as announced in ALNAV 252. This critical score requires a total of 60 points on the following basis:

One-half point for each year of age computed to nearest birthday.

One-half point for each month of active duty from 1 September 1939.

One-fourth point additional for each month of active duty outside the United States since 1 September 1939, (effective 15 September 1945).

Ten points for a state of dependency existing as of 15 August 1945.

On this basis, it is determined that 950 medical officers were eligible for release on 15 September 1945, 190 will be eligible by 1 November 1945, 137 additional by 1 December 1945, and 223 additional by 1 January 1946, or a total of 1,500. Thereafter it is expected that critical scores for release will be lowered by degrees in order to carry out the present plan to separate a total of 8,000 medical officers by 1 September 1946. (Since this article was written, it has been decided to lower the required points. This information will be published by ALNAV. --Ed.)

Many medical officers in the Reserve desire opportunities for "refresher" training before returning to civilian practice. Assignment to duty in United States Naval Hospitals affords one means of supplying such training, and the average period of time allotted for this specific purpose will probably be about three months.

Officers who elect to continue on active duty for a "refresher" period after becoming eligible for release under the point system may do so if they so request. The request may state that it is understood that this continuance on active duty, after eligibility for release, is for the purpose of obtaining assignment in a specific type of service in a Naval Hospital for "refresher" training.

In a limited number of instances, such assignments may be available and possible before the full 60 points for eligibility for release have been reached,

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but this "refresher" training by hospital assignment may retain an officer beyond the date when his eligibility for release on points becomes effective. Periods of assignment of this type, constituting active duty in any U. S. Naval Hospital officially approved for graduate or residency-type training, may be submitted for credits before the American Colleges and the American Boards with every likelihood of acceptance.

Plans are projected for the peacetime utilization of medical officers of the Reserve on inactive duty as consultants, lecturers and in other capacities, in Naval Hospitals near their places of residence. Additional plans are under consideration whereby junior medical officers in the regular Navy undergoing graduate training in U. S. Naval Hospitals may seek and obtain one-year residency appointments in outstanding civilian institutions for the rounding-out of their residency training.

The graduate educational program of the medical corps of the regular Navy, and its peacetime administration offer inducement to medical officers of the Reserve to transfer to the regular Navy. This, it is hoped, may be sought by many.

The continued and active interest of the many reserve officers in the constant advancement of the medical corps of the Navy and in its aims is desired and solicited by the Bureau of Medicine and Surgery. (Personnel Div., BuMed - P. Titus)

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Advantages of the Regular Navy to Officer Personnel: This article is presented in order to assist officers in making a fair comparison of Navy pay and earnings in civil life.

Many officers feel that they are in a worse position than their acquaintances whose salaries in civil occupations are fifty or a hundred dollars a month higher. This sort of comparison is unrealistic in that it ignores the fact that the civilian must pay out more than this difference to secure retirement pay and other benefits which are included in Navy compensation but not reflected in the pay tables. It further ignores certain tax advantages which are given naval personnel, and other factors making for a lower cost of living.

When these "hidden income factors" are calculated, the pay of a married ensign is found to be in excess of \$5,000 per year. That of a married lieutenant with a fogey and one child is in excess of \$6,250 per year; and that of a married lieutenant commander with two fogies and two children is over \$7,500 annually. Each of these factors will be discussed briefly. Sample

figures and rough tables will be included for those factors the monetary values of which can be demonstrated with reasonable accuracy.

Retirement Provisions: A regular Navy officer retires at 75 per cent of longevity pay for physical disability incurred in line of duty (at anytime) for 30 years or more active duty service, or upon reaching 64 years of age. This states the general rule which is adequate for our present purpose. (The full discussion of retirement pay which appeared in the December 1944 issue of the "Bureau of Naval Personnel Information Bulletin" will answer specific questions.)

The table below gives some typical monthly retirement rates, the cost of an outright purchase of such an annuity, and the annual cost of a commercial insurance policy called the "Annual Premium Deferred Annuity", which has almost identical provisions as Navy retirement pay. This table should enable an individual to calculate the "hidden income factor" in his own case.

	Monthly Retirement pay after 30 years' service	Cost of similar annuity from insurance company if purchased		Annual Premium Deferred Annuity*	
		At age 55	At age 64	Begun at age 25	Begun at age 30
Fleet Adm.	\$500.00	\$110,000	\$85,000	\$2086.50	\$1730.50
Rear Adm. (Up.)	500.00	110,000	85,000	2086.50	1730.50
Captain	375.00	83,000	64,000	1564.88	1297.88
Commander	375.00	83,000	64,000	1564.88	1297.88
Lt. Commander	328.13	72,000	56,000	1369.16	1135.55
Lieutenant	281.25	62,000	47,000	1173.66	973.58
Lieutenant (jg)	225.00	50,000	38,000	938.93	778.73
Ensign	187.50	41,000	32,000	782.44	648.94

*Annual cost over a period of 30 years of "Annual Premium Deferred Annuity" to provide monthly sums equal to retirement pay.

(Premiums are higher for a man 25 years of age since, after thirty years of payments, his life-expectancy is greater than that of a man of 30. The insurance company would have to continue a younger man's retirement income for a longer period. --Ed.)

In order to consider the more likely situation, each officer should assume his retired pay will be that of a commander or above.

Tax Savings: There are two Federal statutory provisions relating to military personnel which effect distinct tax savings for this group.

The first and long standing provision provides a distinction between pay and allowances. The latter item includes subsistence and rental allowances which are non-taxable. The second provision, inaugurated at the inception of the war, provides an exclusion of \$1,500 in addition to regular personal and dependency exemptions (currently at \$500 per person).

The "Comparative Tax Table" below presents a comparison of the tax liabilities of several naval ranks in various circumstances, with comparable civilian liabilities. The effect of the extra \$1,500 military exemption is also demonstrated.

For purposes of simplicity and uniformity, Treasury Form 1040 Tax Table for incomes under \$5,000 has been used. This table makes standard allowances for normal deductions. In those instances where incomes exceeding \$5,000 are concerned, taxes are estimated by allowing deductions of 10 per cent of gross pay, which is the manner in which the Short Form 1040 is prepared.

COMPARATIVE TAX TABLE

Naval Personnel Liability Compared with Civilian

Rank	Rental Allowance	No. of Exemptions**	Total Income***	Tax Liability		Civilian Tax
				\$1500 Exemption With	Without	
Ens.	no	1	\$2055	\$ 0	\$260	\$ 312
"	yes	1	2595	0	260	421
"	yes	2	3031	0	160	411
"	yes	3	3031	0	60	311
Lt. (jg)	no	1	2255	0	302	353
"	yes	1	2975	0	302	507
"	yes	2	3411	0	202	496
"	yes	3	3411	0	102	394
Lieut.	no	1	2655	74	384	436
"	yes	1	3555	74	384	639
"	yes	2	3991	10	284	619
"	yes	3	3991	10	184	509
Lt. Comdr.	no	1	3255	198	516	572
"	yes	1	4335	198	516	808
"	yes	2	5026	98	411	856*
"	yes	3	5026	26	311	746*

Comdr.	no	1	3755	302	628	684
"	yes	1	5015	302	628	964*
"	yes	2	5706	202	518	1014*
"	yes	3	5706	102	415	899*

Source: (1) Treasury Department Form 1040
(2) Navy Pay Tables

* Estimate by allowing 10 per cent deductions, in same manner as Form 1040.

** A single Person gets on exemption

*** No longevity increases are included in these figures.

Considering only the first provision which provides a distinction between pay and allowances, the tax savings for married officers are as follows:

Ensign	approximately	\$250
Lt. (jg)	"	300
Lieut.	"	335
Lt. Comdr.	"	445
Comdr.	"	500

The second tax provision which excludes \$1,500 of active service pay from gross income of all military personnel increases the tax savings from \$160 to \$316 roughly in proportion to the total pay involved. These savings which are a hidden income factor to naval personnel, are the equivalent of as much as 14 per cent of total pay.

Medical and Hospital Treatment for Self and Dependents: When a naval officer is sick or has an accident, his pay and allowances continue until he recovers or is retired, in which event it is continued at retired level. Meanwhile, medical services and hospitalization are provided without charge.

One may estimate the monetary value of this from the fact that an expensive health and accident policy providing \$300 monthly income for one year plus coverage of medical expenses costs \$108 annually.

Further, under regulations prescribed by the Secretary of the Navy in accordance with law, dependents of naval personnel are entitled to medical and hospital treatment when appropriate facilities of the Medical Department of the Navy are available.

Since the extent of this benefit will vary with the number of dependents and medical facilities available at the duty station, no monetary estimate of its value will be attempted.

Earnings Examples: The estimates of earnings made at the first of this article were based entirely upon the factors described above. Before continuing with a discussion of factors less readily reducible to exact figures, the estimate table below should be considered. (Note that longevity increases are taken into consideration in these figures; and, therefore, the tax savings shown are not exactly the same as in the table which did not include such increases.)

Other factors. (For details see BuPers' Benefit Guide for Officers and Enlisted personnel--NavPers 15,044)

ESTIMATE OF EARNINGS

	Ensign, married, no longevity, no children	Lt., married, 3 years' ser- vice, 1 child	Lt. Cdr., married, 6 years' service, 2 children
Pay	\$1800.00	\$2520.00	\$3300.00
Allowances	1231.00	1591.00	2026.50
Retirement benefit (30 year policy be- ginning at age 25 to pay \$375, per month;)	1564.88	1564.88	1564.88
Tax Advantages	411.00	531.00	678.00
Health & Accident Protection	108.00	108.00	108.00
	<u>\$5114.88</u>	<u>\$6314.88</u>	<u>\$7677.38</u>

(It should be noted that the annual premium of \$108 for a health and accident policy provides coverage for only one year, whereas if a naval officer is re-tired because of physical disability (not the result of his own misconduct) he is paid three-quarters of his base pay for the rest of his life --Ed.)

SIX MONTHS' GRATUITY--If an officer dies while on active duty, not the result of his own misconduct, his widow, children or other designated beneficiary will be given a lump-sum payment equal to six months' pay at the rate received at date of death (including base pay, longevity, and certain other additions).

Each individual can calculate how much would be paid his dependents under this provision and can estimate its annual cost to a civilian at \$17.50 per thousand for ordinary life policies cost \$15 to \$20 per thousand.

Pensions--If an officer's death is service connected, during peacetime, his widow is paid \$38 per month; a widow and one child receive \$49 with \$10 for each additional child.

The value of this will vary widely with individuals. Its value to a particular individual may be estimated by reference to National Service Life Insurance tables, since the manner of payment is very similar.

Funeral Expenses--When an officer dies the funeral is taken care of at public expense. This is a small item, but is nevertheless a plus value for it would cost several dollars a year to maintain a burial expense policy. Far more significant is the practical demonstration of the policy of grateful Government to take care of the officers whose lives have been dedicated to its service.

Lower Cost of Living: There are certain factors which should be mentioned here for, while not income, their practical effect is the same in that they result in a lower cost of living.

Service personnel and their dependents are allowed the use of commissary stores, ship's service stores, officer's clubs, station movies and many other facilities that are operated on a non-profit basis. Ship's service stores frequently have arrangements with regular merchants whereby a service discount can be secured.

Insurance costs are less by reason of the availability of National Service Life Insurance. It is expected that membership in the Navy Mutual Aid Association will again be opened to Navy officer personnel to provide protection at low rates.

On a permanent change of duty, all expenses are paid for by the Government, including the officer's travel, transportation of dependents and shipment of household effects.

Many schools and colleges offer scholarships limited to sons and daughters of service personnel. In peacetime, private clubs frequently have a service membership at reduced rates, or allow temporary courtesy privileges. In addition, a great many hotels allow discounts to members of the armed forces.

It is not meant to suggest that the peacetime Navy is an Elysium where there are riches for all and it costs nothing to live. However, one should give proper weight to the factors that have been set forth here in order to make a fair comparison between what the Navy proposes to offer and the remuneration anticipated in civil life. (BuSandA News Letter, Sept. '45)

* * * * *

To: ALNAV 283.

BuPers

(Not Restricted)

22 September 1945

Subj: Transfer of Reserve Officers to Regular Navy.

Ref: ALNAVS 202-45. 207-45. 208-45.

The Navy realizes that it has asked Reserve Officers and temporary Regular Officers to apply for transfer to the permanent Regular Navy even though a variety of important factors such as the authorized size of the postwar Navy and the time when the Navy will be returned to permanent ranks have not been finally decided by Congress and the President. Many Reserve and temporary Regular Officers may hesitate to apply for fear that the Navy's earnest purpose may not prove to be what actually happens in fact.

It is already true that any Officer of the Navy may resign at the pleasure of the President and consequently no one is ever irrevocably committed to continue his Naval career. In order that there may be no question in the minds of Reserve and temporary Regular Officers, the President has authorized the Secretary of the Navy to make the following unequivocal guarantee: Any Officer who applies for transfer to the Regular Navy and then comes to the conclusion that he does not want to stay may resign at any time at the pleasure of the President but in any event he may resign on 1 January 1947 and his resignation will automatically be accepted by the President.

The Navy confidently expects that the Reserve and temporary Regular Officers who transfer will be thoroughly happy and satisfied in the choice they have made and consequently that they will not want to put in a resignation but they have the firm option whether or not they decide to use it.

It is possible also that some Officers will decide now not to apply for the Regular Navy but after they get back to civilian life will wish they had applied. The Navy is not pressing Officers to make a final choice now and consequently Reserve Officers and temporary Regular Officers will be eligible for consideration in the Regular Navy provided their applications for transfer are received in the department within six months following the date of release from active duty or separation under honorable conditions. However, in fairness to the Officers who do not insist upon this waiting time, officers who return to inactive duty or are separated before applying will lose precedence commensurate with the interval of time between their release from active duty or separation and their appointment in the Regular Navy.

This ALNAV applies to Marine Corps Officers as well as Naval Officers. All commands are directed to see that the provisions of this ALNAV are immediately brought to the attention of all Reserve and temporary Regular Officers.

--SecNav A. L. Gates.

* * * * *

To: All Medical Officers.

(Not Restricted)

BUMED-X-RR:ttr

25 September 1945

Subj: Naval Medical Museum.

Refs: (a) CNO ltr. Op13-1C-jc, Serial No. 223013, 20 April 1945.

(b) BuMed ltr. BUMED-E-LG A12-2/EN, 24 April 1945.

1. Reference (a) authorizes and enjoins the various Bureaus to collect suitable subjects for museum display under the direction of the Curator for the Navy Department. Reference (b) establishes a medical museum Committee in the Bureau of Medicine and Surgery "for the selection, collection, preparation, and preservation of trophies, relics, pictures, models, dioramas, and other materials of historical interest for exhibit in the contemplated Naval Museum in Washington."

2. With the establishment of a medical museum Committee, a suitable collecting agency has been set up in the Bureau of Medicine and Surgery to receive the materials mentioned in paragraph 1.

3. The medical section of the museum is to present an instructive collection of objects of permanent interest to the history of the Medical Department, arranged in such sequential manner as to set forth their relations one with another and/or with the progression of art, science, or history.

4. It is, therefore, requested that any material meeting the above requirements either on hand or procurable, be forwarded with a letter of descriptive information to:

Chairman, Medical Museum Committee
Bureau of Medicine and Surgery
23rd & E Streets, N. W.
Washington 25, D. C.

5. An enthusiastic response to this request is desirable in the interest of the Bureau.

--ROSS T. McINTIRE.

* * * * *

To: MedOfCom, All NavHosps and NavSpecialHosps
SenMedOf, NavTraSta and NavTraCens,
NavConstTraCens,
NavRecSta, Ships, and Barracks (Via: CO)

BUMED-WN-MG
P3-1/P19-1
4 Sep 1945

Subj: Policy on Publicity Regarding Neuropsychiatry.

- Refs: (a) Joint Security Control Memorandum JSC/B1 Serial 494, 28 Apr 1944.
(b) BuMed CirLtr, BUMED-L-MG,P3-1/P19-1(123-40), 3 Jun 1944.
(c) Joint Security Control Memorandum JSC/B25 Serial 876, 23 Aug 1945.

1. In accordance with ref (c), refs (a) and (b) are hereby rescinded and the following policy promulgated by the Joint Security Control Board (ref (c)) is brought to the attention of all medical officers concerned:

“Information regarding neuropsychiatry will be divided into the following classes:

a. Classified

- (1) Statistics on incidence (percentages and rates) of neuropsychiatric casualties in an active theater.
- (2) Strength and location of military organizations in active theater.

b. Unclassified

- (1) Statistics on incidence (percentages and rates) of neuropsychiatric casualties in all inactive theaters.
- (2) Statistics on incidence and discharge of neuropsychiatric cases in the Zone of the Interior.
- (3) Statements of percentages of men salvaged or returned to duty in the Zone of the Interior.
- (4) Carefully prepared motion pictures and photographs of neuropsychiatric activities. In some instances identifiable photographs of patients may be taken and patients may be interviewed and identified by name in narrative text, provided that:
 - (a) Pictures are taken under Army or Navy supervision, as appropriate.
 - (b) There is no violation of medical ethics or personal privacy.
 - (c) The permission of the patient and the Commanding Officer is obtained. The patient's willingness shall not be a determining factor in granting an interview, permitting himself to be identified by name or permitting himself to be photographed, if the Commanding Officer, on the basis of the recommendation of the patient's physician feels that

the patient's health, the progress of his treatment, or the prospect of recovery will be endangered.

For Joint Security Control:

J. K. COCKRELL

L. E. GUNTHER

W. V. BROWN

--BuMed. Ross T. McIntire.

* * *

This circular letter supercedes previous policies regarding publicity on Neuropsychiatry as noted in The Bumed News Letters of 8 June and 17 August, 1945.

* * * * *

To: All Ships and Stations.

(Not Restricted)

BuMed-D-HM

QR/P19-3

Subj: Dental Treatment of Personnel Eligible for Separation From Naval Service.

13 September 1945

Ref: (a) BuPers Circ. Ltr. 153-45; N. D. Bul. of 31 May 1945, 45-577.
 (b) Alnav 196, par. 14; N. D. Bul. of 15 Aug. 1945, 45-970.
 (c) Joint ltr. BuMed-BuPers, P5-2/P19-3, of 23 Aug. 1945; N. D. Bul. of 31 Aug. 1945, 45-1091.
 (d) Alnav 252, par. 15; 45-1169; this issue.
 (e) BuPers rest. ltr. Pers-231C-mm, P19-4, of 15 Aug. 1945, subject: "Demobilization Plans and Procedures."

1. There is an apparent lack of understanding relative to dental treatment and dental requirements of persons eligible for separation from the naval service.
2. In order to clarify this situation, references (a) to (d), inclusive, are interpreted as follows:

(a) Personnel will not be held for dental treatment in order to qualify for separation from the naval service. This shall not prejudice the rights of any member of the naval service to receive dental treatment.

(b) Form H-4s should be brought up to date and final dental examinations should be entered on prescribed forms.

--BuMed. Ross T. McIntire.

--BuPers. Randall Jacobs.

(Not Restricted)

To: All Ships and Stations.

BuMed-RP-IMB, P2-5/P19-1
MarCorps 1865-20Subj: Physical Examination Prior to Release
From Active Duty or Discharge From
the Naval Service.

BuPers P2-5, 2 August 1945

Refs: (a) BuMed ltr. R-VC: P2-5/QR(093), of 8 Aug. 1942, re physical examination of Naval and Marine Corps Reserves; N. D. Bul. Cum. Ed. 1943, 42-451, p. 442.

(b) BuMed ltr. RL-JRMcK: P2-5/P19-1(094), of 30 Oct. 1944 re physical examination prior to release from active duty or discharge from the naval service; AS&SL July-Dec. 1944, 44-1263, p. 228.

(c) BuMed-BuPers joint ltr. of 27 May 1944 re release from active duty and retirement of enlisted men; AS&SL Jan.-June 1944, 44-702, p. 773.

(d) BuMed ltr. RL-JRMcK: P2-5/P19-1(094), of 26 Dec. 1944, re NavMed Form Y not required in cases of recruits discharged upon recommendation of aptitude boards; AS&SL July-Dec. 1944, 44-1449, p. 250.

(e) BuMed ltr. Y-DFS, P3-3/P3-1(054-40), of 4 Jan. 1945, re roentgenographic examinations of the chests of Navy and Marine Corps personnel; N. D. Bul. of 31 Jan. 1945, 45-83.

(f) Art. H-9408, BuPers Manual.

(g) Par. 1529(c), Manual of the Medical Department.

(h) Par. 3423(d)(4), Manual of the Medical Department.

Enc: (A) List of United States Public Health Service regional separation offices.

1. This letter cancels and supersedes paragraphs 7 and 8 of reference (a), and references (b), (c), and (d), and modifies the instructions in references (f) and (g).

2. No one shall be released from active duty or discharged from the service without first having been thoroughly examined by at least one medical officer. The examination should, if practicable, be conducted by a board of two medical officers and a dental officer, and in the case of commissioned officers and warrant officers it shall be conducted by a board of medical examiners. (Reference: Pars. 1525, 1527 (d), and 1529, Manual of the Medical Department.) The results of this examination shall be carefully recorded in the health record. Further reports are required in most cases as outlined below.

3. The physical examination conducted in connection with the separation of personnel from active service is for the purpose of establishing a record of all deviations from the normal insofar as dental, physical, and mental defects or disabilities are concerned, and for the purpose of determining whether or not any condition exists for which the individual is in need of medical attention or hospitalization. In order that the record of physical examination may be complete the medical examiners shall record on the appropriate form all

deviations from normal (defects) as well as any existing conditions of present clinical significance. In general the reports of these examinations shall be prepared and submitted in accordance with the following instructions:

(a) A NavMed-Y shall be completed and forwarded to the Bureau of Medicine and Surgery in the cases of:

- (1) General-service personnel who are physically qualified for duty at sea or on foreign shore.
- (2) Special-service officer personnel who are physically qualified for duty ashore.
- (3) Personnel of the retired list if physically qualified for the duties assigned.
- (4) Special-assignment enlisted personnel who have not incurred any disqualifying disability.
- (5) Except that NavMed - Y need not be submitted in the cases of:
 - (a) Personnel discharged upon expiration of enlistment, provided they are to be immediately reenlisted.
 - (b) Officer personnel of the Naval Reserve who are released from active duty in order to establish the termination of their flight status and to effect a change in classification, and who are being recalled to active duty immediately.

(b) A NavMed-M shall be completed and forwarded to the Bureau of Medicine and Surgery in the following cases. The NavMed-M may include only those conditions of present clinical significance but the health record entry in such cases shall include all deviations from normal:

- (1) General-service personnel who are not physically qualified for duty at sea or on foreign shore.
- (2) Special-service officer personnel who are not physically qualified for duty ashore.
- (3) Personnel of the retired list who are not physically qualified for the duties assigned.
- (4) Special-assignment enlisted personnel who have incurred a disqualifying disability.
- (5) Except that NavMed-M need not be submitted in the cases of:
 - (a) Those recruits who are discharged from the service upon the recommendation of aptitude boards. In such cases no diagnosis is established and the entry of a diagnosis in the health record is not required. The entry should indicate that the individual is discharged in accordance with approval of the findings of an aptitude board.

(c) A new descriptive sheet (NavMed-H-2) shall be completed and inserted in the health record to replace the old descriptive sheet (NavMed-H-2) which shall be closed out and forwarded to the Bureau of Medicine and Surgery when an enlisted man is:

- (1) Transferred to the Fleet Reserve. (Reference: Par. 2206(g), Manual of the Medical Department.)
- (2) Discharged upon expiration of enlistment if immediately reenlisted.

(d) A NavMed-AV-1 shall be completed on officer personnel of the Naval Reserve who are released from active duty in order to establish the termination of their flight status and to effect a change in classification and who are being recalled to active duty immediately.

4. A dental chart shall be included in the report of final physical examination. In cases where release from active duty or discharge is effected upon the recommendation of a board of medical survey, the record of the dental examination shall be entered on NavMed-H-4, dated, and placed in the health record.

5. The regulations (ref.(h)) require that no one shall be released from active duty or placed on the retired list by reason of physical disability, except upon the approved recommendation of a board of medical survey. This is particularly important because of benefits such as pensions, income-tax exemptions, and civil-service preference which are involved, and therefore the line-of-duty status of disabilities must be determined and made a matter of record. This is equally true when personnel are being examined for transfer to the Fleet Reserve with a view to release from active duty, and when personnel of the Fleet Reserve and of the retired list are being released from active duty. This shall be construed therefore to modify references (f) and (g) to the extent that when men are examined for transfer to the Fleet Reserve and are found to have defects or disabilities of such nature as to disqualify them for duty at sea, the man shall be brought before a board of medical survey and a report shall be submitted on NavMed-M, and NavMed-Y shall be submitted in these cases only if the man is physically qualified for sea duty.

6. When personnel are being examined for separation from active service the medical examiners are required to make a decision regarding the individual's physical fitness for release. This involves questions of whether:

(a) Hospitalization is required, such as for the treatment of disease as active tuberculosis, heart failure, luetic lesions of infectious nature, amebiasis, etc; for correction of such conditions as hernia, draining sinuses, poorly fitted prosthetic appliances (other than dental), etc; or for care of those who are psychotic.

(b) Further study is required to determine the presence or absence of disability.

(c) Further consideration is necessary to determine whether an officer should be recommended for retirement for physical disability. In

determining whether an officer might be eligible for retirement for physical disability it should be borne in mind that to be retired for physical disability an officer must be incapacitated for active naval service, that the incapacity must be the result of an incident of the service, and that the physical disability must be a permanent incurable disease or injury of such character as absolutely to disqualify for duty on the active list. In general, minor or partial or temporary disabilities do not warrant retirement for physical disability.

As a general rule an individual should not be released from active duty or discharged from the service until infectious diseases are under control, a reasonable period of treatment has been provided for existing disability, or arrangements have been made for continued treatment or hospital care if required. There are exceptions such as:

- (d) In cases where the disability is not of a serious nature.
- (e) In cases where the individual concerned desires to be discharged from the service without further delay and is willing to sign a statement to the effect that he has been informed of his need for further medical or hospital care by the Navy prior to discharge but that he desires to be separated from active service without awaiting such medical care.
- (f) In cases of retired and Fleet Reserve personnel who present relatively minor conditions for which they can obtain hospital treatment while in an inactive status.
- (g) In cases of persons otherwise ready for discharge if the sole purpose is to furnish them dental treatment, unless such treatment is necessary to restore masticatory function and promote general health. It is not contemplated that every missing tooth shall be replaced. (Reference: Par. 240(g), Manual of the Medical Department.)

7. Roentgenographic examination of the chest of all naval and Marine Corps personnel shall be made and the interpretation entered in the health record during the physical examination at the time of release from active duty or discharge from the service unless such an examination has been made and the interpretation recorded in the health record during the previous 6 months. Individuals with evidence of pulmonary disease in whom there is a reason to believe that active disease may be present shall be hospitalized for further study with a view to definite establishment of their physical status prior to release from active duty or discharge. (Par. 10, ref. (e).)

8. Serologic tests for syphilis shall be made on all persons about to be discharged or released from active duty in the naval service, excepting those who are to be immediately reenlisted or recalled to active duty. These tests shall be performed as part of the routine physical examination and the results

entered in the individual health record. Separation from the service need not be delayed pending receipt of the serologic report if the individual is free from clinical signs of active syphilis. Persons discharged or released from active duty on ships and stations where laboratory facilities are not available for conducting the tests shall be referred to the nearest naval medical facility where the required facilities are available. No one with syphilis in a communicable state should be released from the service until sufficient treatment has been given to render him noninfectious. In those cases where a positive serologic test is reported after an individual has been released from the service, the United States Public Health Service regional Separation office for the area in which the activity is located should be notified. (See enclosure (A).)

9. Persons being released from active duty or discharged from the service who desire copies of their medical records should be advised to submit their request in writing to the Bureau of Medicine and Surgery.

--MarCorps. A. A. Vandegrift

--BuPers. W. M. Fechteler.

--BuMed. Ross T McIntire

--Approved:

A. L. Gates,

Acting Secretary of the Navy.

Enclosure (A)

UNITED STATES PUBLIC HEALTH SERVICE REGIONAL
SEPARATION CENTERS

Washington, D. C.; U. S. Public Health Service Regional Separation Office
Address: U. S. Public Health Service
Venereal Disease Division
Bethesda Station
Washington 14, D. C.

This office covers the following States:

Connecticut	Maryland
Maine	Virginia
New Hampshire	District of Columbia
Rhode Island	West Virginia
Vermont	North Carolina
Massachusetts	South Carolina
Pennsylvania	Georgia
Delaware	Tennessee
New York	Alabama
New Jersey	Florida

San Francisco, California; U. S. Public Health Service Regional Separation Office

Address: U. S. Public Health Service
 Senior Public Health Representative
 United States Public Health Service
 456 Phalan Building
 760 Market Street
 San Francisco 2, California

This office covers the following States:

Washington
 Oregon
 California
 Montana
 Nevada
 Idaho
 Utah
 Arizona

Chicago, Illinois; U. S. Public Health Service Regional Separation Office

Address: U. S. Public Health Service
 Room 852
 U. S. Customs House
 610 South Canal Street
 Chicago 7, Illinois.

This office covers the following States:

Illinois	Missouri
Wisconsin	North Dakota
Michigan	South Dakota
Indiana	Minnesota
Kentucky	Kansas
Ohio	Nebraska
Iowa	

Dallas, Texas: U. S. Public Health Service Regional Separation Office

Address: U. S. Public Health Service
 813 Mercantile Bank Building
 Commerce at Eway Street
 Dallas 1, Texas

This office covers the following States:

Texas	Louisiana
New Mexico	Colorado
Arkansas	Wyoming
Mississippi	

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To: All Ships and Stations. (Not Restricted)
BuShips S64-1(660E-8)
EN28/A2; BuMed FS/S64
Subj: Lamps, Electric, 100-Watt Daylight 8 August 1945
Blue Rough-Service--Improper Use of

Ref.: (a) Standard Plan, BuShips No. 9-S-4222-L, alt. 27.

1. It has come to the attention of the Bureau of Ships that large quantities of 100-watt daylight blue rough-service lamps (Navy Type TG-20, Federal Standard Stock No. 17-L-4510) are being used aboard many navy vessels in 100-watt fixtures to provide general illumination. Reference (a) indicated that these lamps are specified only for use in smoke indicators.

2. The chief objection to the use of daylight blue lamps to provide general lighting on shipboard lies in the fact that about one-third of the light produced is absorbed by the blue glass bulbs. The corresponding reduction in illumination which results might be tolerated if the light produced by these lamps offered some special visual advantage because of its color. Authorities on vision agree, however, that except for highly specialized seeing tasks such as color matching, this is not the case. Light of so-called daylight color quality may offer a psychological advantage if the user believes it to be beneficial to health or for some other reason preferable to unfiltered light, but this psychological advantage disappears when the facts are known. Economically, the use of daylight lamps is not justified, since they cost just twice as much as standard rough-service lamps. The net result of using daylight lamps for general lighting on shipboard may be summarized: Nothing of value gained, one-third of the light lost, lamp cost doubled.

3. In view of the above it is requested that all vessels now using 100-watt daylight blue rough-service lamps for general lighting discontinue this practice and use instead the standard uncolored 100-watt rough-service lamps (Navy Types TR-7 or TR-13, Federal Standard Stock Nos. 17-L-4512 or 17-L-4529, respectively) in the 100-watt general lighting fixtures.

--BuShips. J. J. Broshek.

--BuMed. W. J. C. Agnew.

* * * * *

Public Health Foreign Reports:

(Not Restricted)

<u>Disease</u>	<u>Place</u>	<u>Date</u>	<u>Number of Cases</u>
Cholera	China	May 5-July 17, '45	644 (188 fatal)
Plague	British E. Africa		
	Kenya-Nyeri District	July 14-21, '45	13 (5 fatal)
	Ecuador - Loja Province	July '45	11 (5 fatal)
	Egypt	May 19-26, '45	5
		June 16-30, '45	29 (4 fatal)
		July 12-21, '45	8 (2 fatal)
	Great Britain, Malta	July 14-21, '45	4 (3 fatal)
			(2 suspected)
		July 29-Aug. 11, '45	1 (1 fatal)
	Morocco(French)	July 1-31, '45	175 (1 suspected)
	Peru	June '45	2
	Portugal-Azores	July 15-Aug. 11, '45	4
Smallpox	Morocco(French)	July 1-31, '45	637
	Nigeria	May 27-June 2, '45	116 (28 fatal)
	Sudan(French)	July 1-20, '45	195
	Union of S. Africa	June 1-July 2, '45	95
Typhus Fever	Algeria	June 11-30, '45	42
	Bulgaria	May 1-27, '45	159
	Ecuador	July '45	61 (3 fatal)
	Egypt	June 16-30, '45	653 (103 fatal)
	Morocco(French)	July 1-31, '45	1247
	Peru	June '45	79
	Sweden	May '45	192
	Turkey	Aug. 4-11, '45	26
Yellow Fever	Columbia	June 24-July 15, '45	6 (fatal)
	Gold Coast, Winneba	Aug. 2, '45	1 (fatal)
	Peru, Crezco Dept.		
	Quincemil	May '45	1
	Venezuela	June 19, '45	Present (35 fatal)
	Zulia State	July 27, '45	2

(Pub. Health Reps., Aug. 17, 24, & Sept. 7, '45)

